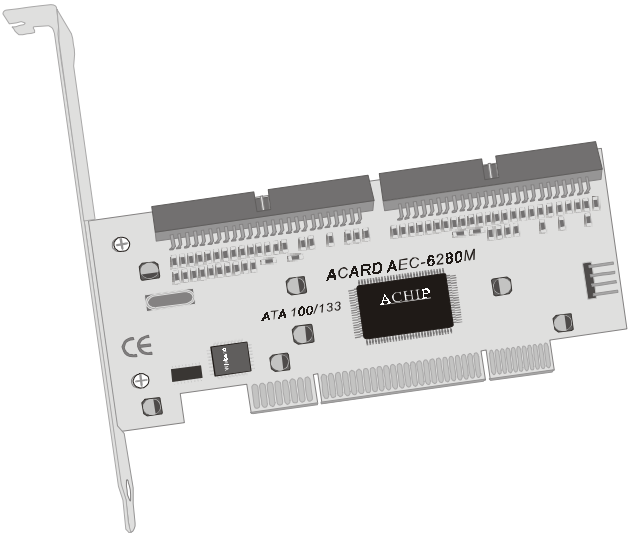
ACARD ATA-133
AEC-6280M

PCI-to-IDE ATA-133 Controller for Macintosh

User's Manual



Version:1.1

ACARD TECHNOLOGY

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Chapter 1 Introduction

1.1 Overview

The ACARD AEC-6280M is the leading Mac add-on card, supports ANSI X3T9.2 CAM ATA4/ATA5/ATA6, data transfer rate up to 133 MB/sec and meets the demand of multimedia, real time video. It's also backward compatible with traditional ATA modes.

The ACARD AEC-6280M supports all models of PowerMac which have a PCI slot, including PowerMac 7200, G3, G4. For PowerMac older than G4, ACARD AEC-6280M can really boost the disk performance up to 100%. For PowerMac G4, ACARD AEC-6280M allows Mac to add more drives and use software RAID.

It supports the true PnP function, in Mac 8.5 and later version, there are no software driver needed for installing an Ultra ATA133/100/66/33 HDD. With the advanced function, the adapter is really user friendly. It is coexist with the on board IDE controller. ACARD AEC-6280M with on board BIOS supports system to boot from ATA HDD. ACARD AEC-6280M also supports multitasking to improve the CPU performance.

1.2 Features

- Powerful advanced function
- IDE data transfer rate up to 133MB/sec per channel
- Supports Ultra ATA 133/100/66/33 HDD
- True Plug & Play
- Supports OS: Mac OS 8.5, OS 9.x and OS X

1.3 Specification

1.3.1 Packing List

When you open the ACARD AEC-6280M package, check the following packing list.

- One ACARD AEC-6280M adapter
- One ATA 133 Cable
- Y Type Power Connector
- One hard disk mounting kits & four screws
- One user's manual

1.3.2 Parts Specification

Power requirement -	voltage: 3.3VB+/- 2%	
	current: 0.5A Max.	
Environment -	Temperature	
	Operating: 0 °C to 60 °C	
	Storage: -20 °C to 85 °C	
Humidity -	15% to 90%	
	Models:	AEC-6280M
Dimension -	Length:	14cm
	Width:	4.7cm
Connectors -	Dual 40 pins IDE internal connectors	

Chapter 2 Hardware Installation

2.1 Installation

The optimized default setting of ACARD AEC-6280M will meet your demand without any modification in most cases.

Notice: system must meet the following items to work under UDMA66 data transferring mode:

1. Make sure your IDE cable is for Ultra ATA66 HDD (40 pins; 80wires)

2. The hard disk supports Ultra DMA33 or higher transferring mode.

3. The PCI bus frequency is 33 MHz.

2.2 Hardware installation Procedure:

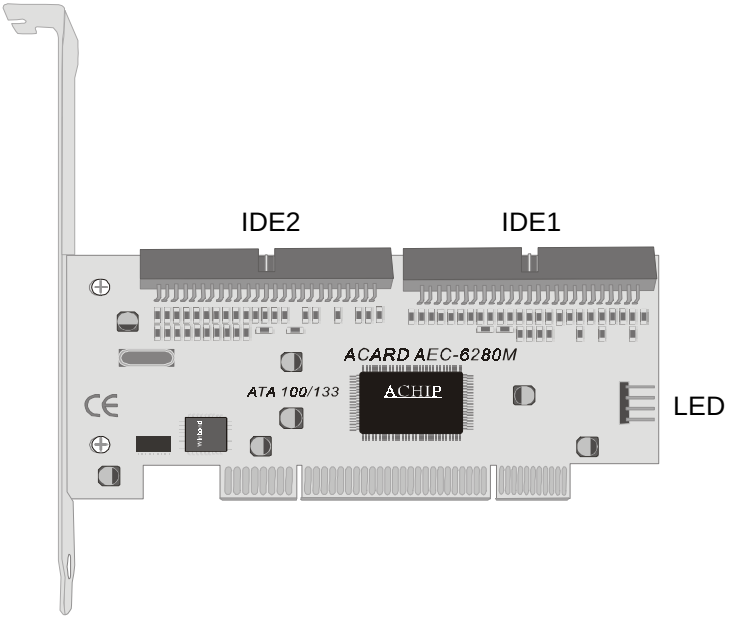
1. Open the Mac's case. (Please reference the Mac's manual.)
2. Choose an empty PCI slot and plug the AEC-6280M adapter.
3. Fix hard drive in your Mac.
4. Connect ATA-133 cable from adapter to hard drive.
5. Close the Mac case.

- Connect 2 hard drives in the same channel, check the Master / Slave jumper.
- For the hard drive's Jumper setting (Master / Slave), refer to hard drive's Manual.
- As hard drive contain old data which might cause the Mac OS installation problems. Before installing Mac OS, the hard drive must be processed the "initialize" first.

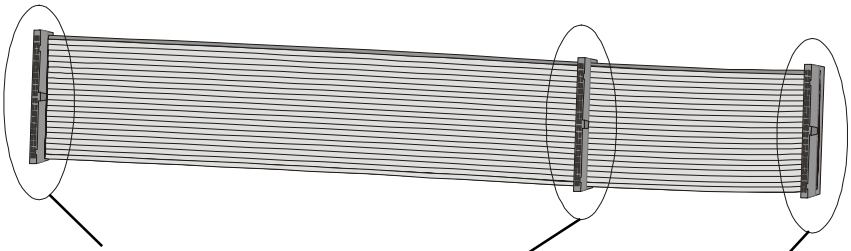
Board Layout:

IDE1: The Primary IDE port

IDE2: The Secondary IDE port



ATA-133 Cable Layout:



Connect to ACARD AEC-6280M Adapter IDE ports(IDE1/ IDE2)

Connect to IDE hard drive (Slave)

Connect to IDE hard drive (Master)

2.3 ACARD AEC-6280M adapter compatibility list

ACARD AEC-6280M is designed specifically for DMA hard drives. The ACARD AEC-6280M supports many ATA 33/66/100 hard drives from the following vendors:

- FUJITSU
- IBM
- MAXTOR
- QUANTUM
- SEAGATE
- WESTERN DIGITAL

2.4 ACARD AEC-6280M cable & power installation

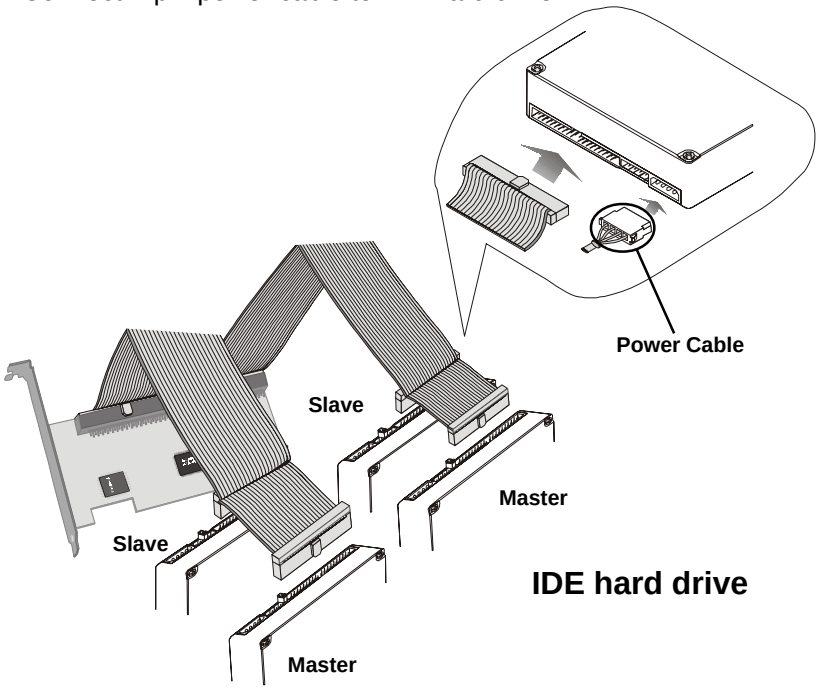
The cable connection methods:

Step 1. Find out pin 1 of IDE connector on IDE hard drive.

Step 2. Find out a color line of the internal IDE ribbon cable indicating pin 1 of connector.

Step 3. Connect the internal IDE cable to IDE hard drive aligning with pin-1 to pin-1.

Step 4. Connect 4-pin power cable to IDE hard drive.



2.5 System Installation

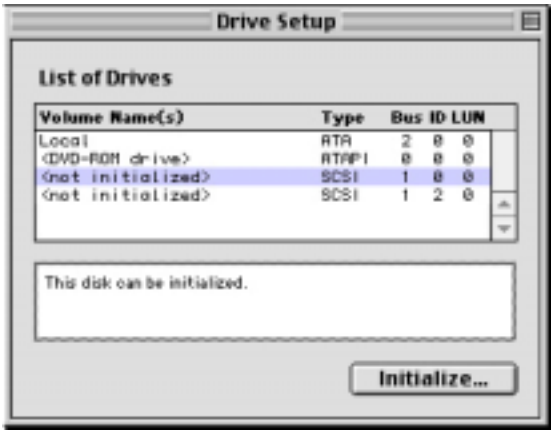
The following example indicates that the proper way of software configuration after connecting the hard drive with ACARD AEC-6280M adapter.

Mac OS 9.x installation:

1. Be sure hardware has installed correctly.
2. Insert Mac OS CD-ROM to Macintosh.
3. Power on Macintosh and press 'C' key.
4. Wait for MacOS and the MacOS CD window popup.
5. Double click on "**Utilities**".

6. Cilck on "**Driver Setup**".

7. Choose the hard drive connecting to ACARD AEC-6280M, then press "**Initialize**" button. For more detail information about "Drive Setup", refer to Mac OS 9 manual.



8. Then start to install an new OS on the hard drive.

Mac OS X installation:

1. Be sure your hardware has installed correctly.
2. Insert Mac OS X CD-ROM to your Macintosh.
3. Power on your Macintosh and press 'C' key.
4. After Mac OS X Boot up, select "**Installer**" from the top selection tools.
5. Select "**Open Disk Utility ...**" to open it.
6. Click on "**Drive Setup**" and choose the hard drive that you want to initialize.

7. Select the hard drive which you want to initialize and choose "**Partition**" to select the number of partition you need.

8. Then click “**Partition**” button to initialize the hard drive.

9. Then start to install an new Mac OS X on the hard drive.

Note: For more information about Mac OS X installation guide, please refer to Mac OS X installation manual.

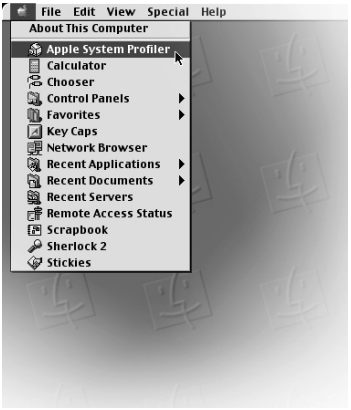
Verify Hard Drive Initialize

For Mac OS 9.x Environment

To make sure the computer “initialize” hard drive successfully. When you initialize the hard drive successfully, on the Mac window will show a new “Untitled” hard drive icon.

For advanced Mac users, find the system information under the Apple Logo pop up. Then choose “Apple System Profiler” to find the information. Check the information and see the computer system status. Follow the instructions below to get how to check the system information.

Step 1. Click on Apple Logo and choose **“Apple System Profiler”** to show hard drives information.



Step 2. Under the "**Apple System Profiler**", you will see the "**System Profiler**". Choose "**Devices and Volumes**" to see the devices status.

Step 3. Under "**Devices and Volumes**", please choose "**PCI**" item. You will find the SCSI card installation status.

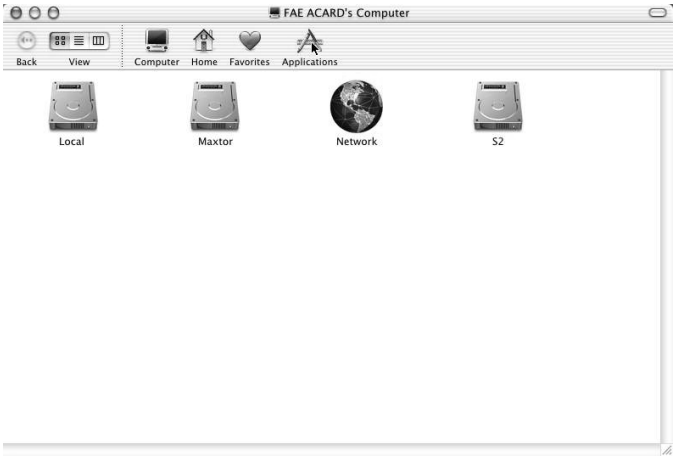
For Mac OS X Environment

To make sure the computer “initialize” hard drive successfully. When you initialize the hard drive successfully, on the Mac window will show a new “Untitled” hard drive icon.

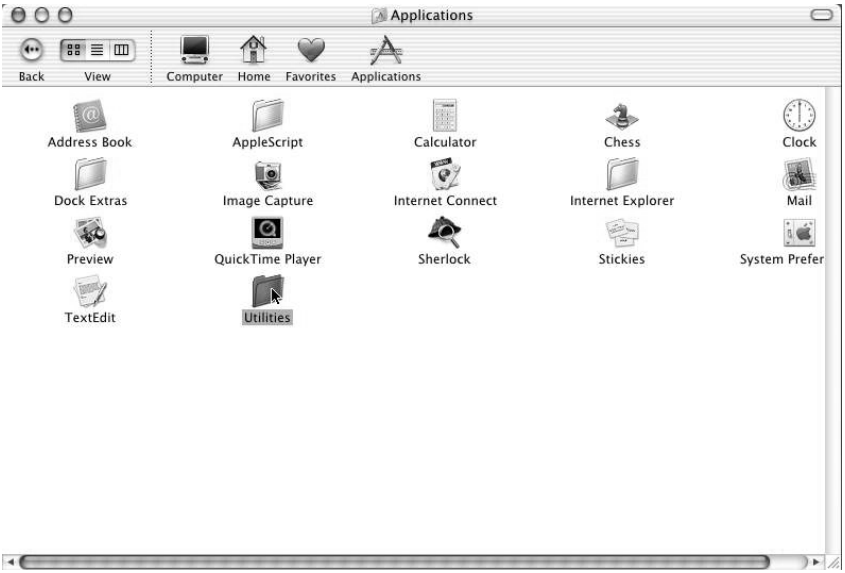
For advanced Mac users, find the system information under the Apple Logo pop up. Then choose “Apple System Profiler” to find the information. Check the information and see the computer system status. Follow the instruction below to get how to check the system information.

Step 1. Please find the “**Finder**” in the bottom of the MAC OS Screen then click it.

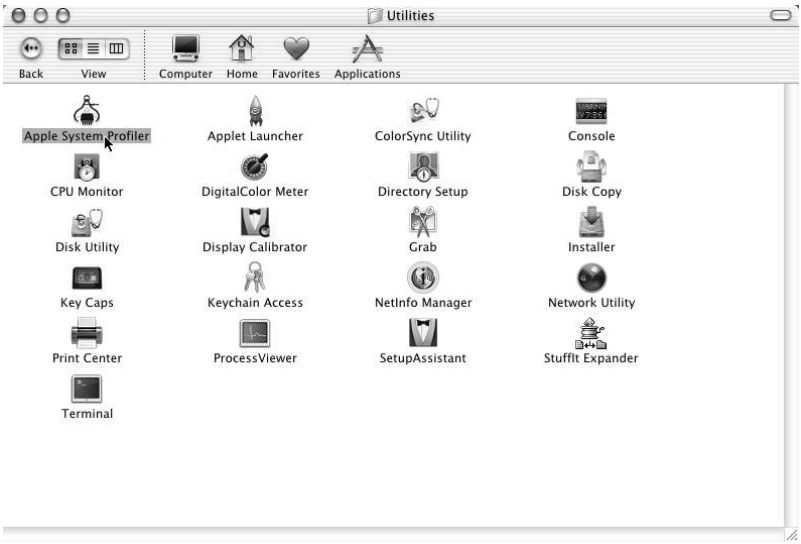
Step 2. Find the “**Application**” sign on the top of the screen and click it.



Step 3. Under the “**Application**”, find out the “**Utilities**” item and click it.



Step 4. Under the "**Utilities**", you will see the "**Apple System Profiler**". Click on "**Apple System Profiler**" to see the devices status.



Step 5. Under "**Devices and Volumes**", please choose "**PCI**" item. You will find the SCSI card installation status.

Chapter 3 Troubleshooting

When installing ***ACARD AEC-6280M*** and it does not function properly, follow the troubleshooting below.

1. Check power supply.
Whenever start to check the malfunction devices, check the power status (ON / OFF).

2. Verify IDE device.
Always make IDE device functions is in proper mode setting before installing ***ACARD AEC-6280M*.**

3. Check host adapter.
To verify the adapter is seated in its slot on the motherboard.

4. Check all connectors and cables.
Check internal IDE connector, device power connector, and cables are connected well. Cables are easily damaged because of un-proper fold. Try a new cable known to be good. Make sure no connector pins are bent. Verify pin 1 on the interface cable is aligned with pin 1 on the drive and host adapter.

5. PCI Slot Position.
Use ***ACARD AEC-6280M*** in Mac Clone computer which is not manufactured by Apple that may need to change the PCI Slot for properly operation.

Appendix 1
Technical Support Form

Email: **support@acard.com**
http://www.acard.com

Model:	AEC-6280M	**F/W Version:**	
System Configuration			
Computer			
CPU			
Memory			
SCSI adapter			
Other I/O card			
Other Storage Device			
MAC OS version			
Hard Disk Configuration			
Model			
Type			
Manufacturer			
Firmware Rev			
Problem Description			

MALAEC6280MN11-0